

## Data Visualization with Python

### Cheat Sheet : Plotly and Dash

Function	Description Syntax	Example
<b>Plotly Express</b>		
<b>scatter</b>	Create a scatter plot <code>px.scatter(dataframe, x=x_column, y=y_column)</code>	<code>px.scatter(df, x=age_array, y=income_array)</code>
<b>line</b>	Create a line plot <code>px.line(x=x_column, y=y_column, title='title')</code>	<code>px.line(x=months_array, y=no_bicycle_sold_array)</code>
<b>bar</b>	Create a bar plot <code>px.bar(x=x_column, y=y_column, title='title')</code>	<code>px.bar(x=grade_array, y=score_array, title='Pass Percentage')</code>
<b>sunburst</b>	Create a sunburst plot <code>px.sunburst(dataframe, path=[col1,col2..], values='column', title='title')</code>	<code>px.sunburst(data, path=['Month', 'DestStateName'], values='Flights', title='Flight Distribution Hierarchy')</code>
<b>histogram</b>	Create a histogram <code>px.histogram(x=x, title="title")</code>	<code>px.histogram(x=heights_array, title="Distribution of Heights")</code>
<b>bubble</b>	Create a bubble chart <code>px.scatter(dataframe, x=x, y=y, size=size, title="title")</code>	<code>px.scatter(bub_data, x="City", y="Numberofcrimes", size="Numberofcrimes", hover_name="City", title='Crime Statistics')</code>
<b>pie</b>	Create a pie chart <code>px.pie(values=x, names=y, title="title")</code>	<code>px.pie(values=exp_percent, names=house_holdcategories, title='Household Expenditure')</code>
<b>Plotly Graph Objects</b>		
<b>Scatter</b>	Create a scatter plot <code>go.Scatter(x=x, y=y, mode='markers')</code>	<code>go.Scatter(x=age_array, y=income_array, mode='markers')</code>
	Create a line plot <code>go.Scatter(x=x, y=y, mode='lines')</code>	<code>go.Bar(x=months_array, y=no_bicycle_sold_array, mode='lines')</code>
<b>add_trace</b>	Add additional traces to an existing figure <code>fig.add_trace(trace_object)</code>	<code>fig.add_trace(go.Scatter(x=months_array, y=no_bicycle_sold_array))</code>
<b>update_layout</b>	Update the layout of a figure, such as title, axis labels, and annotations. <code>fig.update_layout(layout_object)</code>	<code>fig.update_layout(title='Bicycle Sales', xaxis_title='Months', yaxis_title='Number of Bicycles Sold')</code>
<b>Dash</b>		
<b>dash_core_components.Input</b>	Create an input component <code>dcc.Input(value='', type='text')</code>	<code>dcc.Input(value='Hello', type='text')</code>
<b>dash_core_components.Graph</b>	Create a graph component <code>dcc.Graph(figure=fig)</code>	<code>dcc.Graph(figure=fig)</code>
<b>dash_html_components.Div</b>	Create a div element <code>html.Div(children=component_list)</code>	<code>html.Div(children=[html.H1('Hello Dash'), html.P('Welcome to Dash')])</code>
<b>dash_core_components.Dropdown</b>	Create a dropdown component <code>dcc.Dropdown(options=options_list, value=default_value)</code>	<code>dcc.Dropdown(options=[{'label': 'Option 1', 'value': '1'}, {'label': 'Option 2', 'value': '2'}], value='1')</code>

### Author(s)

Dr. Pooja

### Changelog

Date	Version	Changed by	Change Description
2023-06-19	0.1	Dr. Pooja	Initial version created